



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,139	04/07/2006	Jae-Hyuk Oh	60,469-256; OT-5227 LAB	9346
7590 Kerrie A. Laba Carlson, Gaskey & Olds 400 W. Maple Road Suite 350 Birmingham, MI 48009			EXAMINER CHAN, KAWING	
			ART UNIT 2837	PAPER NUMBER
			MAIL DATE 12/15/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/575,139

**Applicant(s)**

OH ET AL.

**Examiner**

Kawing Chan

**Art Unit**

2837

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04/07/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8 and 10-19 is/are rejected.
- 7) ☒ Claim(s) 7, 9, 20 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF-08)
- Paper No(s)/Mail Date 04/07/06.
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application.
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 04/07/06 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by examiner.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 8, 16 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claim 8 recites the limitation "the springs" in line 2. There is insufficient antecedent basis for this limitation in the claim.
6. Claim 16 recites the limitations "the first latching device" in line 4 and "the electronic control signal" in line 5. There are insufficient antecedent basis for these limitations in the claim.

7. Claim 18 recites the limitation "the springs" in line 3. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 10, 11, 13-16 and 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Liston (US 5,366,045).

10. In Re claim 1, with reference to Figures 1-3 and 5, Liston discloses a brake system (Abstract) for an elevator car (24) comprising:

- A ropeless and sheaveless stopping mechanism (32) responsive to an electronic control signal (signal received from tachometer generator (76) to activate the solenoid (64)) to automatically stop an elevator car (24) under predetermined conditions (overspeed condition or breakage of cable or loss of power) (Col 1 lines 49-63; Col 2 lines 34-38; Col 3 lines 36-65).

11. In Re claim 11, Liston discloses a braking system (Abstract, 32) for an elevator car (24) comprising:

- Identifying a need for an elevator braking operation (overspeed condition or breakage of cable or loss of power) (Col 3 lines 36-65); and

- Generating an electronic control signal (signal provided by tach generator (76)) to activate a ropeless and sheaveless stopping mechanism (32) to prevent movement of an elevator car (24) after identifying a need for an elevator braking operation (Col 1 lines 49-63; Col 2 lines 34-38; Col 3 lines 36-65).

12. In Re claims 10 and 13, Liston teaches an emergency stopping mechanism (Figure 2: (32)) for an elevator safety system (Abstract), said emergency stopping mechanism being responsive to said electronic control signal (signal received from tachometer generator (76) to activate the solenoid (64)) to automatically stop the elevator (24) when a car speed exceeds a predetermined threshold speed (Col 3 lines 36-62).

13. In Re claim 14, with reference to Figures 1, 2 and 5, Liston discloses a safety housing (36, 48) for movement with the elevator car (24), positioning safety wedges (50, 51) on opposing sides of a guide rail (25), and mounting the safety wedges (50, 51) and housing (36, 48) for movement with the elevator car (25), and the step of preventing movement of the car includes moving the safety wedges (50, 51) from a non-deployed position (Figure 5: disengaged position) to a deployed position (engaged position) (Col 3 lines 5-35).

14. In Re claim 15, with reference to Figures 3 and 5, Liston discloses the step of forcing the safety wedges (50, 51) into frictional engagement with the guide rail (25) as the safety wedges (50, 51) move from the non-deployed position (disengaged position) to the deployed position (engaged position) (Col 3 lines 5-35).

15. In Re claim 16, Liston discloses the step of latching the safety wedges in the non-deployed position with a first latch mechanism (52, 70), coupling at least one spring (72) to each of the safety wedges (50, 51) to move the safety wedges (50, 51) from the non-deployed position to the deployed position once the first latching device (52, 70) is released in response to the electrical control signal, and latching the safety wedges (50, 51) in the deployed position with a second latch mechanism (70) once the first latching mechanism is released (since the link (70) is threaded into the wedges (50, 51), the movement of the wedges (48) are constrained by the movement of the threaded) (Col 3 lines 5-65).

16. In Re claim 18, with reference to Figure 5, Liston discloses the step of coupling at least one spring (72) to the safety wedges (48), mounting a carrier plate (66) for movement with the springs (72), and controlling movement of the carrier plate (66) with a solenoid actuator (52, 64, 66, 68, 70) (Col 3 lines 5-65).

17. In Re claim 19, with reference to Figures 3 and 5, Liston discloses the step of activating the solenoid actuator (52, 64, 66, 68, 70) to overcome the spring force of the springs (72) by holding the carrier plate (66) and the safety wedges in the non-deployed position (disengaged position) with an electromagnet (64), and releasing the electromagnet (64) from an initial position causing the springs (72) to move the safety wedges (50, 51) into the deployed position (engaged position) in response to identification of an undesirable elevator operating condition (overspeed condition or breakage of cable) (Col 1 lines 49-63; Col 2 lines 34-38; Col lines 5-65).

***Claim Rejections - 35 USC § 103***

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. Claims 2-6, 8, 12 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liston (US 5,366,045) in view of West et al. (US 4,518,153).

20. In Re claims 2 and 12, Liston has been discussed above, but it fails to disclose the stopping mechanism is resettable from a remote location in response to an electronic reset signal.

21. However, West discloses the stopping mechanism is resettable from a remote location in response to an electronic reset signal (Abstract) (since a brake actuator can be reset remotely, it inherently discloses an electrical reset signal to activate the reset operation).

22. Thus, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to have modified the teachings of Liston with the teachings of West, since it is known in the art to remotely reset the safety brake mechanism after the brake has been set so as to be able to easily and conveniently control the brake mechanism.

23. In Re claim 3, with reference to Figures 1, 2 and 5, Liston discloses the stopping mechanism (32) includes at least one set of safety wedges (50, 51) adapted to be

positioned on opposing sides of a guide rail (25) and a safety housing (36, 48) that cooperates with said set of safety wedges (50, 51) to apply a braking force to said guide rail (25) when said safety wedges (50, 51) move from a non-deployed position (disengaged position) to a deployed position (engaged position) (Col 3 lines 3-35).

24. In Re claim 4, Liston discloses the stopping mechanism (32) includes a first latching device (52, 70) for holding said safety wedges (50, 51) in said non-deployed position, a second latching device (70) (since the link (70) is threaded into the wedges (50, 51), the movement of the wedges (48) are constrained by the movement of the threaded) for locking said safety wedges (50, 51) in said deployed position, and at least one spring (72) associated with said safety wedges (50, 51) to move said safety wedges (50, 51) from said non-deployed position to said deployed position once said first latching device (70) is released in response to said electronic control signal (Col 3 lines 5-65).

25. In Re claim 5, with reference to Figures 3 and 5, Liston teaches the first (52, 70) and second (70) latching each comprises a solenoid (64) (the link is connected to and actuated by the solenoid (64)).

26. In Re claims 6 and 17, with reference to Figures 3 and 5, Liston teaches an actuator (52, 64, 66, 68, 70) operably coupled to said spring (72) to hold said spring (72) and the corresponding safety wedge (50, 51) in a non-deployed position under normal operation (Col 3 lines 5-65). In addition, as we have discussed above, West teaches a brake actuator can be reset remotely in response to an electrical reset signal after the brake has been set (Abstract).



27. In Re claim 8, with reference to Figure 3, Liston discloses at least one spring (72) associated with said safety wedges (50, 51) and a connector (40, 66) for connecting said springs (72) to an actuator (52, 64, 66, 68, 70) (Col 3 lines 5-65).

#### ***Allowable Subject Matter***

28. Claims 7, 9, 20 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nomura, Simmonds et al., Skalski et al., Hugel, Pipes, Lang et al., Thompson et al., Sissala et al., McIntyre, Luebke and Korhonen are further cited to show related teachings in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kawing Chan whose telephone number is (571)270-3909. The examiner can normally be reached on Mon-Fri 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Benson can be reached on 571-272-2227. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kawing Chan  
Examiner  
Art Unit 2837

/Walter Benson/  
Supervisory Patent Examiner, Art Unit 2837